REMARKS

Claims 10-16 are pending. By this Amendment, no claims are cancelled, no claims are amended, and no claims are added. Claim 16 was withdrawn previously.

In view of the following comments, Applicants respectfully request favorable consideration and allowance of the claims.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 10-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as their invention. Specifically, the Examiner rejected the "labyrinth-like" language in claim 10 as being indefinite.

Applicants thank the Examiner for pointing out any perceived uncertainty in the scope of claim 10. However, Applicants respectfully assert that one skilled in the art would be able to determine the scope of claims 10-15, including the term "labyrinth-like," as used in claim 10. Specifically, labyrinth has been defined as, for example, "An intricate structure of interconnecting passages through which it is difficult to find one's way; a maze." The American Heritage® Dictionary of the English Language, Fourth Edition (2006), Houghton Mifflin Company.

Using such a definition, one skilled in the art would be able to discern the meaning of the term "labyrinth-like," as used in claim 10. Courts have held that it is only when a claim term remains so insolubly ambiguous, without a discernible meaning after all reasonable attempts at construction, is the claim term indefinite. MPEP 2173.02 citing Metabolite Labs., Inc. v. Lab.

Corp. of Am. Holdings, 370 F.3d 1354, 1366, 71 USPQ2d 1081, 1089 (Fed. Cir. 2004). Thus, because one skilled in the art would be able to discern the meaning of the term "labyrinth-like," as used in claim 10, Applicants respectfully request withdrawal of the 35 U.S.C. § 112, second paragraph rejection.

Rejection Under 35 U.S.C. § 103 Over Gardam, Horsthemke, Horsthemke II, and Wilmeth

Claims 10-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "The Production of Machinable Cr Deposits" by Gardam ("Gardam") in combination with EP 1,205,582 and U.S. Patent No. 6,837,981 to Horsthemke (collectively "Horsthemke"), DE 44 32 512 to Horsthemke ("Horsthemke II"), and U.S. Patent No. 5,196,108 to Wilmeth et al. ("Wilmeth"). Applicants respectfully request reconsideration of the rejection based on the following comments. Applicants incorporate by reference their comments from the Amendments of January 16, 2008 and April 2, 2007.

A *prima facie* case of obviousness of Applicants' claimed invention has not been established, as Gardam, Horsthemke, Horsthemke II, and Wilmeth, individually or in combination, do not teach or suggest all of the features included in independent claim 10. Specifically, the references do not teach or suggest a method of producing a structured hard chrome layer, wherein the "hard chrome layer comprises at least one of a cup-shaped structure, a labyrinth-like structure, or a column-shaped structure." Rather, in contrast to Examiner's assertion in the February 28, 2008 Office Action (page 4), nodules that are accentuated do not represent a cup-shaped, labyrinth-like, or column-shaped structure, but rather a spherical structure.

Further, there would be no reason that person of ordinary skill in the art would look to the teachings of Horsthemke, Horsthemke II, or Wilmeth for combination with those of Gardam. Specifically, Gardam is directed towards forming soft chromium layers for cutting tools using simple H_2SO_4 electrolytes, whereas the other cited references are directed towards the formation of hard chromium layers using very different electrolytes. The teachings of Gardam (formation of chromium layers with decreased hardness) are thus contrary and teach away from to the focus of these references, namely, the formation of chromium layers with increased hardness.

Moreover, in contrast to the Examiner's approach, the current yield is not simply transferable from one electrolyte to another. During electrolytic deposition of chromium, hydrogen forms at the cathode, the metal deposition takes place and Cr(VI), as well as other ions, is reduced at the cathode. At the anode, on the other hand, oxygen forms and an oxidation of Cr(III) to Cr(VI), as well as other ions, occurs. The current yield depends on a number of parameters of the method, for example, on the electrolyte, in particular the type and amount of acids, which influence the electric conductivity, the type and amount of further ions and the current density. Because the claimed electrolyte differs from the electrolyte of Gardam, it is not possible to simply transfer a current yield from Gardam to another electrolyte. Correspondingly, the current yield of the methods using electrolytes that contain an aliphatic sulfonic acid and a molybdate is much higher than 12%. In addition, Gardam adds further ionic compounds, e.g., Fe(III), Cr(III), or Al(III). These compounds are reduced from oxidation level III to oxidation level II at the cathode and are oxidized from oxidation level II to oxidation level III at the anode. This also reduces the current yield. Therefore, it would not have been obvious for one skilled in

the art to provide a method that combines the feature of a low current yield from Gardam with the electrolytes from the other cited references.

Also, the references do not render Applicants' claimed invention *prima facie* obvious, as the cited references teach away from the combination with Gardam and/or Gardam teaches away from combination with these references. As recognized by the Examiner, Horsthemke teaches operation at "at a cathode efficiency of at least 15%." Col. 5, lines 50-58, emphasis added. Likewise, as recognized by the Examiner, Wilmeth teaches away from its combination with Gardam. Wilmeth teaches a "cathode efficiency of the process is greater than about 18%." Col. 6, lines 44-46, emphasis added. Further, Gardam teaches away from the use of lower current efficiencies stating, "However the low cathode current efficiency of 6% and consequent low plating rate of about 0.0006 cm/hr which are obtained with these conditions are impractical." One skilled in the art, upon reading Horsthemke, Horsthemke II, and Wilmeth would be led in a direction directly divergent from the feature of claim 10 of providing a cathodic current yield of 12 % or less.

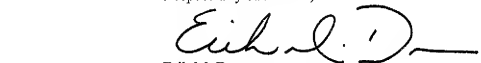
As such, a *prima facie* case of obviousness is not met, as the cited references do not teach or suggest all of the features included in independent claim 10 and there is no suggestion, motivation, or reason prompting a person of ordinary skill in the art to combine the teachings of Gardam with those of Horsthemke, Horsthemke II, or Wilmeth. With respect to specific features of the claims depending from independent claim 10, these are not commented on further, as they are presently moot given the above analysis, although Applicants do not acquiesce in the Examiner's position. As such, Applicants respectfully request reconsideration of the rejection.

Conclusion

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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